

REMARKS

The Commissioner is hereby authorized to charge any fees associated with this response or credit any overpayment to Deposit Account No. 13-3402.

Respectfully submitted,



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Attorney Docket No.: SCH-1832

Date: December 17, 2001

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**VERSION WITH MARKINGS TO SHOW CHANGES MADE**

*Please amend the claims as follows:*

3. (Amended) A protein, according to claim 1 [claims 1 to 2],
- a) that has the ability to bind specifically to the ED<sub>b</sub>-fibronectin domains and that comprises the  $\alpha 2\beta 1$  chain of the integrin;
  - b) that is expressed or activated specifically in endothelial cells;
  - c) that is expressed or activated specifically in stromal cells of a tumor;
  - d) that is expressed or activated specifically in tumor cells;
  - e) whose binding to the ED<sub>b</sub>-fibronectin domains is inhibited by a polypeptide and that comprises the  $\alpha$  chain of the integrin; and
  - f) that has an apparent molecular weight of 120-130 kDa for the light chain and 150-160 kDa for the heavy chain, determined by SDS-polyacrylamide gel electrophoresis.
4. (Amended) Protein according to claim 1 [claims 1 to 3], characterized in that the endothelial cells are proliferating endothelial cells.
17. (Amended) Antibody that is able to bind to a protein according to claim 1 [one of claims 1-10].
19. (Amended) Antibody according to claim 17 [one of claims 17-18] that is able to inhibit effects that are specific to the ED<sub>b</sub>-fibronectin domains.
20. (Amended) Antibody according to claim 17 [one of claims 17-18], whereby the binding and inhibition are carried out in vitro and/or in vivo.
21. (Amended) Antibody according to claim 17 [one of claims 17-20], wherein it is monoclonal or recombinant.
22. (Amended) Antibody, according to claim 17 [one of claims 17-21], wherein it is an scFv fragment.

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23. (Amended) Cell that expresses a protein according to claim 1 [one of claims 1-10].
24. (Amended) Cell that expresses an antibody according to claim 17 [one of claims 17-22].
25. (Amended) Phage that expresses an antibody according to claim 17 [one of claims 17-22].
26. (Amended) Process for screening compounds that bind to a receptor of the ED<sub>b</sub>-fibronectin domains, whereby the process comprises:  
comparison of a response of cells in the presence of one or more of these compounds with the control response of said cells in the absence of these compounds, whereby the cells express a protein according to claim 1 [one of claims 1-10] or  
comprise a nucleic acid that codes for this protein, and whereby the response or the control response is mediated by a receptor of the ED<sub>b</sub>-fibronectin domains.
28. (Amended) Process according to claim 26 [one of claims 26-27], wherein a binding region of the ED<sub>b</sub>-fibronectin domains comprises sequences SEQ ID NOS: 1-4 or portions thereof.
31. (Amended) Process according to claim 26 [one of claims 26-30], whereby the compounds are selected from the group that comprises antibodies, artificial antibodies, antibody fragments, peptides, low-molecular compounds, aptamers and Spiegelmers.
34. (Amended) Process for screening compounds that bind to the ED<sub>b</sub>-fibronectin domains, whereby the process comprises:
  - a) Bringing cells into contact with a fixed concentration of a protein that comprises the ED<sub>b</sub>-fibronectin domains or a protein with one of the sequences that are represented in SEQ ID NOS: 1-4, in the presence of different concentrations of one or more of the compounds; and
  - b) Determination of differences in the response of cells to the protein that comprises the ED<sub>b</sub>-fibronectin domains or a protein with one of the sequences that are represented in SEQ ID NOS: 1-4, in the presence of the compounds in comparison to the control response of cells to the protein

that comprises the ED<sub>b</sub>-fibronectin domains or a protein with one of the sequences that are represented in SEQ ID NOS: 1-4, in the absence of these compounds, whereby

the cells express a protein according to claim 1 [one of claims 1-10] or

comprise a nucleic acid that codes for this protein,

and whereby the response or the control response is mediated by a receptor of the ED<sub>b</sub>-fibronectin domains.

38. (Amended) Process according to claim 34 [one of claims 34-37], whereby the compounds are selected from the group that comprises antibodies, artificial antibodies, antibody fragments, peptides, low-molecular substances, aptamers and Spiegelmers.

40. (Amended) Use of a protein according to claim 1 [one of claims 1-10 or an antibody according to one of claims 17-22] for screening compounds that bind to a receptor of the ED<sub>b</sub>-fibronectin domains or the ED<sub>b</sub>-fibronectin domains.

41. (Amended) Use of a cell according to claim 23 [one of claims 23-24] for screening compounds that bind to a receptor of the ED<sub>b</sub>-fibronectin domains or the ED<sub>b</sub>-fibronectin domains.

43. (Amended) Use of a protein according to claim 1 [one of claims 1-10] to develop antibodies or scFv-fusion proteins for diagnostic or therapeutic purposes.

44. (Amended) Use of a cell according to claim 23 [one of claims 23-24] to develop antibodies or scFv-fusion proteins for diagnostic or therapeutic purposes.